



# Objectives for Human Missions to NEOs

## Technologies

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# Magnitude of Findings



Theme	Number of Objectives
Demonstrate Deep Space Capabilities	38
Scientific Research	19
Planetary Defense	9
Other	9

- Overarching observations

# Deep Space Capabilities Theme: Key Observations



- Developing and testing/demonstrating Long Term Capabilities
  - Shake down for other future missions
  - System and technology (high reliability, low maintenance, long life)
    - Life support
    - Power & Prop
- Understanding the resources available for utilization

# Scientific Research Theme: Key Observations



- Develop understanding of SS formation & Evolution
- Sample Return
  - Extraction, coring/drilling
  - Intelligent selection
  - Context for meteorite collection

# Planetary Defense Theme: Key Observations



- Define the diversity of characteristics of the NEO population
  - Ground truth for remote sensing & modeling
- Test deflection methods
- Emplace retroreflectors for orbit determination
- Characterize
  - Mass
  - Internal structure
  - Rotation rate

## Other



- Rekindle the culture of exploration and discovery



# Backup

# Possible Breakout Discussions for Tomorrow



- Optional Chart